

ACC NR: AT6036605

SOURCE CODE: UR/0000/66/000/000/0244/0245

AUTHOR: Kuznetsov, O. N.; Lebedev, V. I.; Litsov, A. N.

ORG: none

TITLE: Problem of the "application" method of strict sensory deprivation during prolonged quiet-room tests [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 244-245

TOPIC TAGS: isolation test, sensory deprivation, space psychology, psychologic stress, cosmonaut training, psychophysiology

ABSTRACT:

Methods were sought to naturally enforce strict sensory deprivation in the absence of subjective psychological complications. In the process of soundproof chamber tests of neuropsychic stability during normal daily activity and an increase of up to 9 hours of regulated sleep, it was established (based on subjective evaluations by the subjects, EEG's during sleep, autography, nocturnal pulse and respiration dynamics) that the majority of subjects slept no longer than 7 hours. The remaining time

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allotted for sleep was spent in a horizontal position in darkness with strictly limited movements. These hours were tolerated with great difficulty but were not considered as artificial by the subjects.

From here, experiments using a shifting daily activity regimen (sleep from 14:00—23:00) were conducted. Tests began at 13:00. During the first regulated sleep period (experimental night) subjective and objective data showed that subjects did not sleep more than 4 hr. The remainder of sleepless time was spent lying in a rigid position in the darkened soundproof chamber. This permitted the calculation of sleepless hours while conducting prolonged chamber tests applying strict sensory deprivation on a background of relative deprivation. Despite the fact that these states were tolerated with great difficulty, no psychopathological manifestations were noted. The degree of human adaptation to sensory deprivation was judged to be a direct result of functional adaptation to altered daily routines.

The method of enforcing strict sensory deprivation on a background of relative sensory deprivation while increasing the number of hours of regulated sleep during a normal and altered daily routine can be used for evaluating spacecraft-operator tolerance to sensory deprivation.

[W. A. No. 22; ATD Report 66-116]
Card 2/2 SUB CODE: 06,05 / SUBM DATE: 00May66

ACC NR: AT6036641

SOURCE CODE: UR/0000/66/000/000/0260/0261

AUTHOR: Litsov, A. N.

ORG: none

TITLE: Problem of applying information theory methods in evaluating human pilot adaptability to changed diurnal regimes [Paper presented at the Conference on Problems of Space Medicine hold in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 260-261

TOPIC TAMS: biologic rhythm, space physiology, isolation test, psychophysiology

ABSTRACT:

The effects of various factors (health, profession, attentiveness, emotional strain, working day, etc.) on the traffic capacity of an operator were studied under the direction of Professor I. A. Peymer. The calculations were based on investigations of individual components of interceptor pilot activity in laboratory models. The author developed, tested, and applied special methods (using more than 100 subjects) in experiments with normal and altered daily routines. The traffic capacity or quantity of information received and processed by the operator

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In units of time was used as a quantitative criterion of activity. Traffic capacity was calculated using modified formulas of Brillouin and Shannon.

It was found that exposure of an operator to experimental conditions in which the normal daily routine was altered caused the activation of adaptive-accommodative mechanisms facilitating the development of a daily, dynamic stereotype which conformed to the altered environment. The study established that the dynamics of work capacity during an altered daily routine closely coincides with the daily dynamics of physiological functions, indicating an internal relationship between two

processes. Comparing the dynamics of work capacity with the daily periodicity of physiological functions, it is possible to detect qualitative differences in the effect of various daily activity routines.

It is also possible to determine the time necessary for human adaptation to an altered daily routine, based on daily work-capacity dynamics and the periodicity of physiological functions.

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It was concluded that the dynamics of operator traffic capacity, which synthetically characterizes human activity under altered routine conditions, is a valuable supplementary index of work capacity. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

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L 00169-67 TSS-2/INT(1)/SEC(L)-2 SOTB T1/DN/GD/CW
ACC NR: AT6036480 SOURCE CODE: UR/0000/66/000/000/0036/0036

AUTHOR: Arzhanov, I. M.; Beregovkin, A. V.; Bryanova, I. I.; Duyanov, P. V.;
Zaloguyev, S. N.; Kamen'shchikov, Yu. V.; Kovalov, V. V.; Krasovskiy, A. S.;
Kuznetsov, S. V.; Litsov, A. N.; Nikitin, A. V.; Nistratov, V. V.; Poruchikov, Ye. A.;
Potkin, V. Ye.; Teres'yev, V. G.; Fedorov, Ye. A.; Khlebnikov, O. F.;
Yaroshenko, G. L.

13

61.
61

ORG: none

TITLE: Results of clinical and physiological investigations of the crew of the first multimanned Voskhod spacecraft [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 34-36

TOPIC TAGS: space medicine, space physiology, weightlessness, bodily fatigue, stress reaction, combined stress, cardiovascular system, central nervous system, manned spaceflight/Voskhod-1

ABSTRACT: The inclusion of a physician in the crew of the Voskhod-1 made it possible to increase medical investigations of the crew members during flight and to compare them with results of preflight and postflight examinations. The scope of the physiological examinations was selected in order to obtain a more complete evaluation of the functional condition of the cardiovascular and central nervous systems, and the function of

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L 08259-67

ACC NR: AT6036480

external respiration of the cosmonauts. Physical exercises and orthostatic tests were included to detect earlier signs of physiological shifts.

Examinations were carried out before and after training in the ship, where certain conditions of flight were simulated, and also two weeks before flight. Postflight examination was begun fifteen minutes after landing and was continued for the first four days after the flight and also two weeks later.

After landing, the cosmonauts were active, looked somewhat excited, and complained of general fatigue. They were found to have hyperemia of the mucosa of the upper respiratory tract and conjunctivitis.

Komarov's weight dropped by 2.6%, Feoktistov's weight dropped by 4%, and Yegorov's by 3.9%. Weight loss was determined by Zhdanov to be due to water and fat loss. Neurological examination revealed a light swaying in the Romberg position, a tremor of the fingers, and increased perspiration. In addition, Yegorov showed a contraction of the retinal arteries. Disruption of vision and vestibular difficulties were not noted. Changes in EEG indicated an increase in inhibitory processes in the cortex of the brain. A diminution in work capacity was established by

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ACC. NR. AT60361.80

psychological experiments (increase in the number of mistakes, increase in latent periods).

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Indices of cardiovascular activity during rest did not exceed wide norms. However, an increase in pulse frequency was noted (Komarov up to 96, Feoktistov up to 100, and Yegorov up to 94 beats/min), as well as moderate drop in arterial pulse pressure at the expense of an increase in diastolic pressure. All three cosmonauts, when subjected to exercise, showed a significant increase in the pulse rate and inertia in the stroke volume. Feoktistov and Yegorov showed a significant diminution in the heart stroke volume and minute circulation of the blood during the passive orthostatic test. This could indicate a disruption of the venous inflow to the heart.

Postflight blood examinations indicated neutrophilic leukocytosis and eosinopenia. Urine was found to contain significant quantities of salts, chiefly urates, single erythrocytes (in the field of vision), and an increase in the excretion of 17-oxygenated corticosteroids. Eosinopenia, an increase in excretion of products of hormone decomposition, indicated the development of a stress reaction in cosmonauts. Since some of the indications found on the flight were also found after training in the train-

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ACC NR: AT6036480

ing ship, there is reason to attribute them to limitation of motor activity under conditions of weightlessness. The functional shifts found after flight are indications of a general fatigue, a moderate stress reaction, and a certain amount of detraining. In general, the changes observed in the cosmonauts were of one type. The differences found between the cosmonauts can be attributed to individual differences. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06, 22 / SUBM DATE: 00May66

Card 4/4 egl

ZAGRYADSKIY, V.P., podpolkovnik meditsinskoy sluzhby, kand.med.nauk;
LITSOVA, N.M., podpolkovnik meditsinskoy sluzhby, kand.med.nauk

Successive visual images in flying activity. Voen.-med. zhur. no.8:
61-64 Ag '61. (MIRA 15:2)
(AVIATION MEDICINE) (OPTICAL ILLUSIONS)

LISTOVA, N. M., ZAGFYADSKY, R. G. and IMANGULOV, R. G.

"The Gas Exchange and Energy Consumption of the Men in the Rifle Units Engaged in Tactical Exercises".

Voyenno Meditsinskiy Zhurnal, No. 4, 1962

GRATSianskaya, N. N.; LITSOVA, N. M.

"pri uchastii O.A. GANTSKOY) (SSSR). Voprosy tipologii traditsionnogo
zhilishcha Tsentral'noy i Yugo-Vostochnoy Evropy."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences,
Moscow, 3-10 Aug 64.

LITSOYEV, N.D., starshiy inzhener; STAVER, V.F., starshiy elektromekhanik

Additional device for the service channel of the RM-24A radio
relay apparatus. Avtom., telem. i sviaz' 4 no. 12:25-26 D '60.
(MIRA 14:1)

1. Debal'tsevskaya distantsiya signalizatsii i svyazi Donetskoy
dorogi.
(Railroads--Communication systems)

STAVER, V.F., inzh.; LITSOYEV, N.D., starshiy inzh.

Changes in the circuit for the automatic switching-in of
auxiliary power supply to radio relay apparatus. Avtom.,
telem. i sviaz' 5 no.10:37-38 0 '61. (MIRA 14:9)

1. Debal'tsevskaya distantsiya signalizatsii i svyazi Donetskoy
dorogi (for Beaver).
(Railroads—Electronic equipment)
(Electric power supply to apparatus)

L 11398-67 EWT(m)/FMP(j) RM
ACC NR: AP7003654

SOURCE CODE: UR/0079/66/036/008/1421/1424

AUTHOR: Dombrovskiy, A. V.; Litstyan, V. N.; Grigorenko, A. A.; Shovchuk, M. I.
ORG: Chernovitskly State University (Chernovitskly gosudarstvennyy universitet)
TITLE: Reactions of arylmethylenetriphenylphosphoranes with acid chlorides
SOURCE: Zhurnal obshchey khimii, v. 36, no. 8, 1966, 1421-1424
TOPIC TAGS: organic phosphorus compound, nitrobenzene, nonmetallic organic derivative

ABSTRACT: The reactions of a number of arylmethylenetriphenylphosphoranes, with the general formula $(C_6H_5)_3P=CHCOAr$, with acetyl, benzoyl, and p-nitrobenzoyl chlorides were studied. When benzene solutions of benzoyl-, p-tolyl-, p-chlorobenzoyl-, and p-bromobenzoylmethylenetriphenylphosphoranes were mixed with equivalent amounts of acetyl chloride or heated with benzoyl chloride in carbon tetrachloride, crystalline salts were formed, with the general formula $[(C_6H_5)_3P-CH=C(Ar)(OCOR)]Cl^-$. In the reaction with

p-nitrobenzoyl chloride (heating in benzene), a transylation reaction occurred in which 2 moles of the arylmethylenetriphenylphosphorane reacted with 1 mole of p-nitrobenzoyl chloride, giving crystalline C-acylation products: p-nitrobenzoyl arylmethylmethylenetriphenylphosphoranes with the general formula $(C_6H_5)_3P=C(COC_6H_4NO_2-p)-COAr$, and arylmethyltriphenylphosphonium chlorides in good yields. The formation of C-derivatives with p-nitrobenzoyl chloride, in contrast to the O-derivatives with the other chlorides tested, is explained by a substantially greater positive charge on the carbonyl carbon atom of.

UDC: 546.18 + 547.297

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ACC NR: AP7003654

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p-nitrobenzoyl chloride than in the other acid chlorides, resulting in electrophilic attack on the ylide carbon atoms of the arylmethylenetriphenylphosphorane leading to the formation of a carbon-carbon bond without transfer of the reaction center. Orig. art. has: 2 tables. [JPKS: 38,970]

SUB CODE: 07 / SUBM DATE: 25Jun65 / OTH REF! 004.

Card 2/2 jb

LITSYANSKAYA, M.S.

Yeast

Yeast water as a nutritive medium for *Acetobacter malanogenum*,
Trudy Len. ob. va est. 69 №. 3, 1949

Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

LITSYN, G.P.

Acute thrombophlebitis of the hepatic veins. Sov. med. 25 no.11:
133-137 N '61. (MIRA 15:5)

1. Iz Lyubotinskoy zheleznodorozhnay bol'nitsy (glavnnyy vrach
D.I.Pronin). (HEPATIC VEINS--DISEASES) (PHLEBITIS)

16,8000(103), 1132, 1103)

31267
S/103/61/022/011/008/014
D273/D306

AUTHOR: Litsyn, N. M.

TITLE: Relay control of linear-asymmetric objects

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 11, 1961,
1493-1497

TEXT: The author analyzes two systems consisting of a non-symmetric relay element and either an object possessing different pure time delays or an object without pure time delays, but with different transfer functions for closed and open states of the relay. The first system is applicable to a heating installation where the flow of steam would be regulated throughout or in part of the plant. The pure time delay of passage of the steam would be greater than that of opening the steam ducts by a quantity equal to the condensation time of the steam passing in the heater. The mathematical treatment which is presented is accompanied by a graphical representation of the process and assumes that the system has equal pure time delays τ_0 , where τ_0 corresponds to the opening of

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the relay. The basic characteristics of the relay system are determined as:

$$J(T') = -\frac{T'}{2\pi} \tilde{z}_1(T') - j\tilde{z}_1(T')$$

and

$$j\tilde{y}_1'(T') = -\frac{T'}{2\pi} \tilde{z}_1(\gamma_1 T') - j\tilde{z}_1(\gamma_1 T')$$

But as $\tilde{z}(T) = \tilde{z}(0)$ and $h(0) = 0$ when $t < T_0$, after some transformations, the final expressions for the relay system are found to be:

$$\begin{aligned} J_1(T') = & -\frac{T'}{\pi} K_p \left\{ c' + \sum_{v=1}^n c_{v_0} \frac{e^{P_v(T'-\tau_v)} - e^{P_v[(l-\gamma')T'-\tau_v]}}{1 - e^{P_v T'}} + \right. \\ & \left. + j \frac{2\pi}{T'} \sum_{v=1}^n c_{v_0} \frac{e^{P_v(T'-\tau_v)} - e^{P_v[(l-\gamma')T'-\tau_v]}}{1 - e^{P_v T'}} \right\} \end{aligned}$$

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and

$$J_{\tau_1} (T') = - \frac{T'}{\pi} K_p \left\{ -c' + \sum_{v=1}^n c'_v \left[e^{P_v(lT' - \tau_v)} - \frac{e^{P_v(l+\gamma')T' - \tau_v}}{1 - e^{-P_v T}} \right] + \right. \\ \left. + j \frac{2\pi}{T'} \sum_{v=1}^n c_v \left[e^{P_v(\gamma'T' - \tau_v)} - 1 - \frac{e^{P_v(lT' - \tau_v)} - e^{P_v[(l+\gamma')T' - \tau_v]}}{1 - e^{-P_v T}} \right] \right\}.$$

The author then suggests a graphical determination of γ' and T' which can be repeated to give γ'' and T'' when both pure time delays are equal to τ_π , the closing of relay. Determination of a series of values for γ' , T' and γ'' , T'' is used to find the minimum period characteristic of the regulator. In the application this corresponds to determining the minimum period and temperature of the air coming in contact with the heater. The second system is one, in which the object has a relay element which opens and closes at the same time as the basic linear correcting element. A schematic bloc diagram

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is given of the system and the calculations give final equations, similar to those of the previous example but in which $l = 1$ and $\tau = 0$ and values of f and T are again found. A practical example is given in an appendix and relates to a heating installation in a mine. The object considered has the following data: time constant $T_0 = 200$ seconds, $\tau_0 = 18$ seconds, $\tau_{\pi} = 28$ seconds, $X_0 = 0.045 \theta_{\max}$ where X_0 = regulator range and θ_{\max} = maximum increment of the free parameter. The system was calculated theoretically and produced on a model of the MN-7 type with a relay attachment. The change in the external temperature corresponds to a change in f_{π} . A graph of period of auto-oscillation is given against the percentage change in f_{π} . The smooth curve is given as calculated by E. S. Zanevskiy; the crosses give the results from the model and the circles are experimental results. Results are in agreement as shown in the following table:

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I_n	1/8	1/8	1/2	2/8	5/8
$T_{\text{per}}^{\text{calc.}}$	0,17	0,33	0,47	0,61	0,778
$T_{\text{meas.}}^{\text{mod.}}$	0,18	0,33	0,47	0,62	0,78
$T_{\text{alc.}}^{\text{exp.}}$	0,187	0,43	0,525	0,585	

There are 3 figures and 3 Soviet-bloc references.

SUBMITTED: January 28, 1961

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L 63752-65 EW(d)/IPP(n)-2/E/P(1) IJP(c) NM/BC

ACCESSION NR: AR50033(2)

S/0271/64/000/011/A041/A047
62-50'

SC
S

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 11A271

AUTHOR: Litsyn, N. M.; Vertgeim, E. A.

TITLE: Optimization of relay-control systems intended for second-order plants
with complex roots

CITED SOURCE: Uch. zap. Permsk. un-t, no. 103, 1963, 36-42

TOPIC TAGS: automatic control system, optimal automatic control

TRANSLATION: In order to obtain a satisfactory performance of a relay control system (maximum speed, noovercontrol, specified cycling amplitude), a sum of the input variable and a quantity proportional to its first derivative,
 $U_{in} = I_{out} + K I'_{out}$ is applied to the input of a hysteresis-type relay element.
The minimum transient time, in the relay-control systems with second-order plants, corresponds to a definite K on whose value the cycling amplitude also depends.
With K increasing, the cycling amplitude decreases but the transient time

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ACCESSION NR: AR503342

increases. A step variable K_1 , which takes on a value K_1 with an open relay element and K_2 with a closed relay element, is considered as a possible way for system optimization. A stable second-order plant with complex roots is considered (the method also holds true for the systems with real roots). The investigation is conducted in a oblique phase plane of the relay-control system. Formulas for K_1 and K_2 are derived which ensure minimum transient time, and also formulas for the cycling period and for the duty factor. A method of designing the system is indicated. Two illustrations. Bibliography: 2 titles.

SUB CODE: DP, IE

ENCL: 00

mcb
Card 2/2

LITSYN, N.M., inzh.; ZANEVSKIY, E.S., inzh.; SUKHOV, Ye.Ye., inzh.

Contactless relay system for establishing the performance of excavators.
Izv.vys.ucheb.zav.;gor.zhur. 7 no.9:164-167 '64.

(MIRA 18:1)

1. Permskiy politekhnicheskiy institut. Rekomendovana nauchno-issledovatel'skim sektorom.

DINKEL', A.D.; LITSYN, N.M.

Remote depth discharge meter. Biul.tekh.-ekon.inform.
Gos.nauch.-issl.inst.nauch.i tekhn.inform. no.9:20-21
'62. (MIRA 15:9)
(Flowmeters)

DINKEL', A.D.; DIRKS, G.G.; LITSYN, N.M.

Portable electronic checking dynamograph. Neft. khoz. 41
no. 11,59-62 N '63. (MIRA 17:7)

LITSYN, P.P., dotsent. (Khar'kov); GROZA, K.Ye., mladshiy nauchnyy sotrudnik
(Khar'kov)

No. 5 compound for treating malaria. Vrach. delo no. 1:93
Ja '57 (MLBA 10:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut malyarii i
meditsinskoy parazitologii.
(MALARIA) (PHARMACOLOGY)

LITTERA, L.

Production of white oils and petroleum sulfonates. p. 150.
(PALIVA, vol. 35, no. 5, May 1955, Praha)

S0: Monthly List of East European Accession,(EEAL), LC, Vol. 4,
No. 11, Nov. 1955, Uncl.

LITTERER, M.

"Development of the urban-settlement network in Wroclaw (Breslau) Province
in the 19th and 20th centuries. p. 65." (PRZECIAD GEOGRAFICZNY. POLISH
GEOGRAPHICAL REVIEW, Vol. 24, no. 1/2, 1952, Warszawa, Poland.)

SO: East European L. C. Vol. 2, No. 12, Dec. 1953.

LITTERER-MARWEGE, Wanda

On the method and scope of investigating housing conditions. Przegl
statyst 8 no.4:357-367 '61.

LITTERMANN, I.

Dr. Vilmos Milko, 1878-1956. Orv. hetil. 95 no.44:1205-1206
28 Oct 56.

(OBITUARIES
Milko, Vilmos (Hung))

LITTEROV, S.M.

Assembly of distribution boxes with voltages up to 500 volts.
Prem.energ. 11 no.3:32-33 Mr '56. (MLRA 9:7)
(Electric engineering)

LITTEROV, S.M., inshener.

Sockets for fluorescent lamps. Prom.energ.11 no.8:27 Ag '56.
(Fluorescent lamps) (MLRA 9:11)

LITTEROV, S.A.

LITTEROV, S.M.

Decrease the volume of engineering documentation. Prom.energ.
12 no.8:12-13 Ag '57. (MIREA 10:10)
(Electric cables)
(Subways)

LITKEV, S.M., inzh.; MIOSLAVOV, Yu.K., inzh.

Lighting of the new Moscow subway stations. Svetotekhnika 4 no.9:
8-10 8 '58.

(MIRA 11:8)

1. Gosudarstvennyy proyektno-izyskatel'nyy institut (metro).
(Moscow--Subways) (Fluorescent lighting)

LITTEROV, S.M., inzh.

Use of A3100V automatic switching apparatus for illuminating devices.
Svetotekhnika 5 no.8:27-29 Ag '59. (MIRA 13:2)

1. Metregiprotrans. (Subways--Lighting)

AVERIN, A.A., inzh.; LITTEROV, S.M., inzh.

Special problems in laying cables at the Lenin Hills
Station of the Moscow subway. Transp.stroi. 9 no.9:51-52
S '59. (MIRA 13:2)
(Moscow--Electric cables)

LITTEROV, S.M.

Characteristics of the surface extension of the subway. Gor.
khoz. Mosk. 33 no.10:32-33 0 '59. (MIRA 13:2)

1. Rukovoditel' gruppy Metrogiprotransa.
(Moscow--Subway)

LITTEROV, S.M., inzh.

Supplying power and lighting installations with current from
common 380/320 v transformers. Transm.stroi. 10 no.2:45-46
(MIRA 13:5)
F '60.
(Electric transformers) (Subways)

LITTEROV, S.M., inzh.

Lighting of the Maiakovskii Square tunnel. Svetotekhnika 6 no.11:10-
12 M '60. (MIRA 13:11)

1. Metrogiprotrans.

(Tunnels--Lighting)

LITEROV, S.M.

Electric heating of stair in underpasses for pedestrians. Gor. khoz.
Mosk. 34 no.11;28-29 N '60. (MIRA 13:11)

1. Metrogiprotrans.
(Electric heating) (Underpasses)

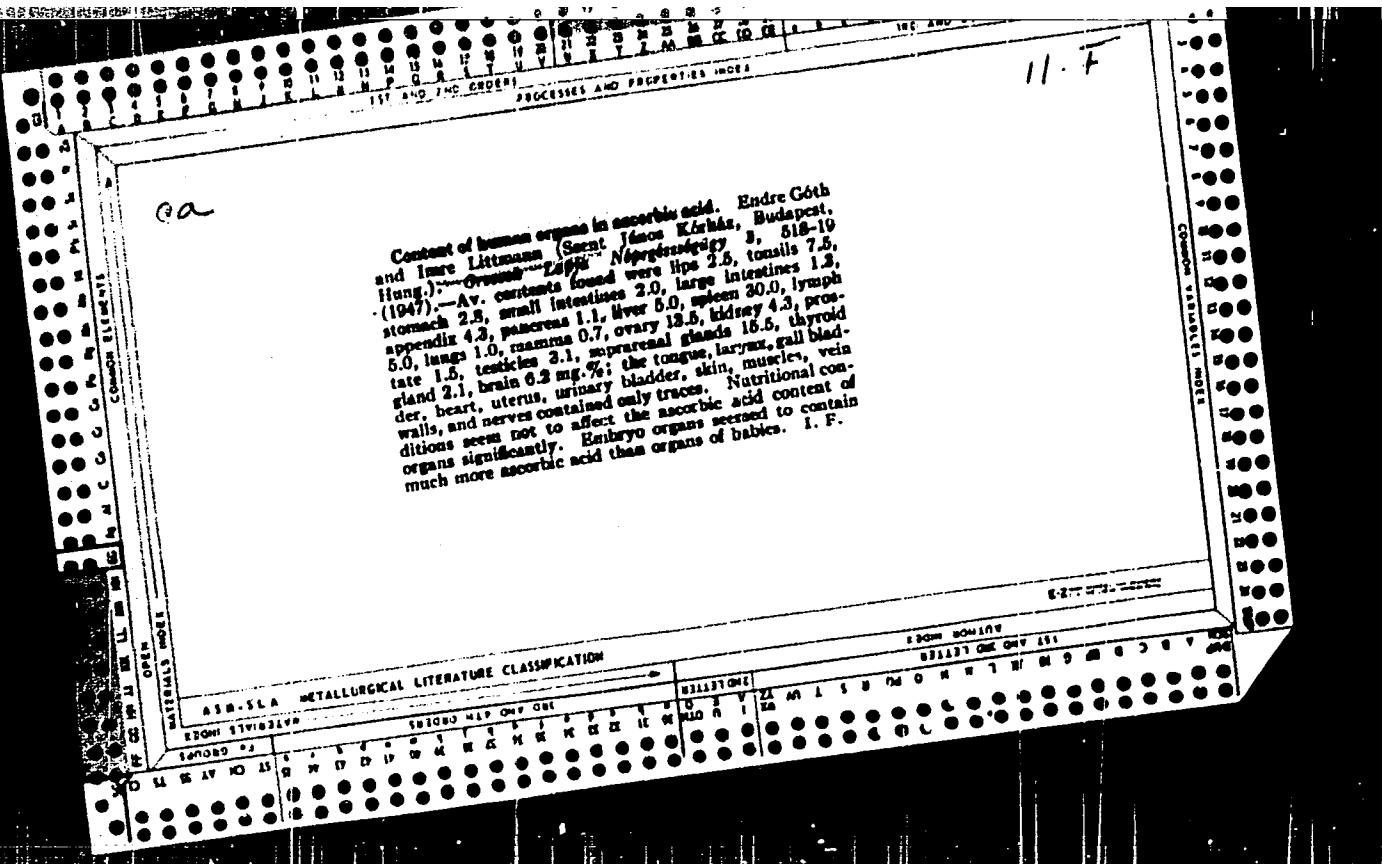
TUDOR, V.; LITTMAN, S.; BHACHE, St.

Delta-cortisone in the treatment of viral hepatitis. Probl.
ter., Bucur. 10 no.3:63-69 '59.
(Hepatitis Infectious, therapy)
(Prednisone, therapy)

LITTMANN, I. 1947

"Cancerous Tissue and Ascorbic Acid."

Orvosok Lapja, Budapest 1947, 3/47(1956-1958)
Abst: Exc. Med. V., Vol. 11, No. 2, p. 99



SZABO, G.; LITTMAN, I.

Surgical therapy of portal hypertension. Magy. belgyv. arch 5 no.3:
118-122 Sept 1952. (CIML 25:5)

1. Doctors. 2. First Internal Clinic (Director -- Prof. Dr. Istvan
Rusnayak) and Clinic for Advanced Training in Surgery (Director ---
Dr. Imre Littman) of Budapest Medical University.

LITTMAN, I.

The role of the practicing physician in the treatment of congenital heart diseases; treatment of the ductus Botalli persistens. Orv. hetil. 94 no.8:197-199 22 Feb 1953. (CIML 24:3)

1. Doctor. 2. Clinic for Advanced Training in Surgery (Director -- Prof. Dr. Imre Littmann), Budapest Medical University.

LITTMAN, I.; KUNOS, I.

Surgical therapy of mitral stenosis. Orv. hetil. 94 no.41:1127-1130
11 Oct 1953.
(CMLL 25:5)

1. Doctors. 2. Clinic for Advanced Training in Surgery (Director -- Prof.
Dr. Imre Littmann), Budapest Medical University.

LITTMANN, I.

"Achievements in heart surgery in Hungary; based on a lecture delivered at the 1953 General Assembly of the Hungarian Academy of Sciences." p. 474. (Temeszet es Technika, Vol. 112, no. 8, Aug 53, Budapest)

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Unclassified

LITTMANN, Imre

[Congenital defects of the heart and large vessels] Vrozhdeannye poroki
serdtza i krupnykh sosudov. Moskva, Medgiz. 1954. 229 s. (MLRA 8:2)
(Heart—Abnormities and deformities)
(Blood vessels—Abnormities and deformities)

LITTMANN, Imre, dr.

Experiences in surgical treatment of coarctation of aorta. Orv.
hetil. 95 no.48:1314-1317 28 Nov 54.

1. A Budapesti Orvostudomanyi Egyetem Sebesztovabbkepző Klinika-
janak (igazgató: Littmann Imre egyet. tanár) kozlemenye.
(COARCTATION OF AORTA, surg.
technics & results)

LASZLO, Janos, dr.; LITTMAN, Imre, dr.; TEMESVARI, Anta, dr.; ROBICSEK,
Ferenc, dr.

The relation between hemodynamics and changes of the pulmonary vessels
in the mitral stenosis. Orv. hetil. 95 no.50:1368-1375 12 Dec 54.

1. A Budapesti Orvostudomanyi Egyetem I. Korbonctani es Kiserleti
Rakkutato Intezetek (igazgato: Balo Jozsef dr. egyet. tanar) es
a Budapesti Orvostudomanyi Egyetem Sebesztovabbkepso Klinikajancak
(igazgato: Litman Imre dr. egyet. tanar) kozlemenye.

(MITRAL STENOSIS, physiol.
hemodynamics & pulm. vasc. changes)

(LUNGS, blood supply
pathol. changes in mitral stenosis, hemodynamics)

LITTMANN, Imre, dr.; ROBICSEK, Ferenc, dr.; TEMESVARI, Antal, dr.;
KUNOS, Istvan, dr.

Importance of preoperative hemodynamic tests in mitral stenosis.
Magy. belorv. arch. 8 no.4:112-116 Aug 55.

1. A Budapesti Orvostudomanyi Egyetem Sebesztovabbkepzo
Klinika janak kozlemenye. (Igazgato: Littman, Imre dr. egyetemi
tanar).

(MITRAL STENOSIS, surgery,
preop. hemodynamic tests.)

LITTMANN, Imre, dr.,; KUNOS, Istvan, dr.,; TEMERSVARI, Antal, dr.,;
ROBICSEK, Ferenc, dr.,; JOMA, Istvan, dr.

Results in 200 cases of commissurotomy. Orv. hetil. 96 no.26:
701-708 26 June 55

1. A Budapesti Orvostudomanyi Egyetem Sebesztovabbkezdo Klinikajának
(igazgató: Littmann Imre dr. egyet tanár) kösléménye.

(MITRAL STENOSIS, surgery,
commissurotomy, results)

LITTMANN, Imre, dr.,; SOLTESZ, Lajos, dr.

Resection and successful replacement of obliterate popliteal artery by lyophilized human artery. Orv. hetil. 96 no.37:
1028-1030 11 Sept 55.

1. A Budapesti Orvostudomanyi Egyetem Sebeasztovabbkepzo Klinikajának (igazgató: Littmann Imre dr. egyet. tanár) kozl.
(ARTERIES, POPLITEAL, surgery.
implant of lyophilized artery in humans)
(TRANSPLANTATION,
arterial lyophilized implant into popliteal artery
in humans)

LITTMANN, Imre, dr.; ROBICSEK, Ferenc, dr.; TEMESVARI, Antal, dr.

Operated case of atypical coarctation of aorta. Magy. sebeszet
9 no.5:309-312 Oct 56.

1. A Budapesti Orvostudomanyi Egyetem Sebessztovabbkepzo
Klinikajanak koszlemenye. Igazgato: Littmann, Imre, dr.
egyetemi tanar.

(COARCTATION OF AORTA, case reports
atypical, hemodynamic & angiographic findings & surg.
(Hun))

LITTMANN, Imre, dr.; KEMESVARI, Antal, dr.; ROBICSEK, Ferenc, dr.

Congenital arteriovenous aneurysm of the lung. Orv. hetil.
97 no.16:434-437 15 Apr 56.

1. A Budapesti Orvostudomanyi Egyetem Sebesztovabbkepso
Klinikajananak (igazgato: Littmann, Imre dr. egyet. tamar)
kozlemensye.

(LUNGS, blood supply
arteriovenous fistula, clin. aspects (Hun))
(FISTULA, ARTERIOVENOUS
pulm., clin. aspects (Hun))

EXCERPTA MEDICA Sec 18 Vol. 1/11 Cardiovasc. Dis. Nov 57

3227. LITTMANN I. Surg. Inst., Post-Grad. Educ., Univ. Med. Sch., Budapest.
Some problems of the surgery of mitral stenosis Therapia hung. 1956, 2 (8-14) Graphs
11 Illus. 3

The paper is concerned with the problems so far unresolved. The most urgent problem is that of establishing the degree of possible insufficiency. The size of the left ventricle is an important factor in the absence of obstacle to emptying as well as an aneurysmal enlargement of the left atrium. Heart catheterization is also of value. A slight insufficiency does not adversely affect the operation prognosis, as it does not disappear, or declines to some small degree. It is important to recognize the simultaneous presence and magnitude of aortic valvular defects, since valvotomy of the mitral involves increased strain on the left ventricle. The symptoms of aortic stenosis are discussed. In 100 operations for mitral stenosis, aortic stenosis was

3227

discovered during surgical intervention (56 times), while in only 20 cases the correct diagnosis was made before operation. Only once was simultaneous splitting of the aortic stenosis necessary. It was well tolerated by the patient. Mitral stenosis and tricuspid defects occurred together less often - occasionally a functional insufficiency due to over-straining of the right atrium. It is no contraindication to operation, since it improves after removal of the strain on the lesser circulation. In the case of organic tricuspid insufficiency with haemodynamic complications an operation cannot be contemplated. Among 400 cases of mitral stenosis there were 11 patients with moderate tricuspid insufficiency. Stenosis was not observed. The mortality in the 400 operations mentioned was 4.25%.
Kremer - Düsseldorf. (IX, 18)

EXCERPTA MEDICA Sec.15 Vol.10/6 Chest Diseases June 57

1443. LITTMANN I., KUNOS I., TEMESVÁRI A., ROBICSEK F. and JÓNA I.
Chir. Fortbildungsklin., Med. Univ., Budapest. *Erfahrungen mit 260
mitralen Kommissurotomien. Experiences in connection with
260 mitral commissurotomies ACTA MED. ACAD. SCIENT. HUNG.
(Budapest) 1956, 9/1-2 (67-84)

Important factors affecting the results of mitral valve surgery are described. In
the series reported, the operative mortality was 5%; greatly improved were 61.1%,
moderately improved 25%, unimproved or worse 8.9% of the patients.

Rapant - Olomouc (IX, 15)

LITTMANN, Imre, dr.,; HARKANYI, Istvan, dr.,; PADANYI, Alajos, dr.,;
TOTH, Jozsef, dr.,; RUDICS, Imre, dr.,; TAKATSY, Endre, okl. gm.

Induction and abolishment of ventricular fibrillation by
electroshock. Magy. sebeszet 9 no.3:166-169 June 56.

1. A Budapesti Orvostudomanyi Egyetem Sebesztovabbkepzo Klinikajunak
kozlemenye Igazgato: Littmann Imre dr., egyetemi tanar.

(VENTRICULAR FIBRILLATION, exper.
induction & abolishment by electric fibrillator-
defibrillator appar. in dogs (Hun))

LITTMANN, Imre, dr.; TEMESVARI, Antal, dr.; ROBICSEK, Ferenc, dr.;
KUNOS, Istvan, dr.

Mitral commissurotomy and the problem of embolism, based on
experiences of 400 mitral commissurotomies. Magy. sebeszet
9 no.5:273-279 Oct 56.

1. A Budapesti Orvostudomanyi Egyetem Sebesztovabbkepzo Klinikaja
(igazgato: Dr. Littmann, Imre egyetemi tanar) Szivesbeszeti
Osztalyanak kozlemenye.

(COMMISSUROTOMY, compl.

embolism in mitral commissurotomy, incidence & prev.
methods (Hun))

(EMBOLISM

In mitral commissurotomy, incidence & prev. methods
(Hun))

LITTMANN I.

EXCERPTA MEDICA Sec.18 Vol.1/7 Cardiovascular July 57

2068. LITTMANN I., ROBICSEK F. and TEMESVÁRI A. Budapesti Orvostud.
Egyet. Sebesztőállóképző Klin. KÖZL., Budapest. Atipusos coarctatio aortae operált
esete *An operated case of atypical aortic coarctation* Mag. Sebészet. 1956, 9/5 (309—312)
Graphs 2 Illus. 4

Two constrictions of the aorta were present: a smaller one proximal to the origin of

2068 CONT.

the left common carotid artery and a longer segment of coarctation situated typically, close to the origin of the left subclavian artery. In addition, the initial part of the left subclavian artery was markedly stenosed. Direct measurement of the blood pressure by catheterization, and aortography were used as diagnostic aids. No operation was performed on the proximal constriction due to its minor extent, the distal coarctation, on the other hand, was completely (2 cm.) resected and an end-to-end anastomosis was performed. The left subclavian artery — obliterated in its major part — was ligated and dissected. No complications followed and the patient was discharged in good health.
Lazarovits — Budapest (XVIII, 9*)

LITTMANN, GÖTTI MEDICA Sec.9 Vol.11/6 Surgery June 57

- 3045 LITTMANN L., TEMESVÁRI A., ROBICSEK F. and KUNOS I. Herzchir
Abt., Chir. Fortbildungsklin., Med. Univ., Budapest. "Die mitrale Com-
missurotomie und die Emboliefrage. (Auf Grund von Erfahrungen bei 400
mitralen Commissurotomien). Mitral commissurotomy and the
problem of embolism. (A study of 400 cases of mitral
commissurotomy) CHIRURG 1956, 27/7 (307-311) Illus. 5
Thrombosis of the atrium and of the left auricle is not a rare occurrence in cases of
mitral stenosis with auricular fibrillation. It causes the phenomena of peripheral
embolism in mitral patients, even without operation; such preoperative embol-
ism is not regarded as a contra-indication. On the contrary, the present authors
fully agree with those authorities who regard preoperative embolism as one more

3095 CONT.

reason for operation. Auricular thrombosis and the danger of peroperative embolism constitute a definite difficulty for the cardiac surgeon. It is correctly stated that the best way of preventing these phenomena is a careful and gentle operative technique, causing the minimum of trauma. A distinction is made between massive thrombosis of the atrium and the auricle, small intertrabecular thrombosis of the atrium and pedicled polypoid thromboses. A review is presented of the various techniques described by cardiac surgeons whose purpose it was to force access to the left auricle in spite of a thrombosed atrium and still to avoid peroperative embolism. On this subject, the original article should be consulted. It should be mentioned that the authors are opposed to the technique of Bailey, which consists in dissecting, in the upper mediastinum, the aortic branches and obliterating them during repeated periods in the course of the intracardiac manoeuvres. A report is given of the experiences and results of 412 operations, 46 of them performed in the presence of auricular thrombosis. In conclusion, emphasis is laid on the importance of preventing the formation of postoperative auricular thrombosis, by separating, by means of ligation, the atrium from the auricle. Postoperative use of anticoagulants appears to be useless and even dangerous.

Naef - Lausanne

TEMESVARI, Antal, dr.; ROBICSEK, Ferenc, dr.; PAVLIK, Jozsef, dr.;
LITTMANN, Imre, dr.

The reversed Botallo duct. Orv. hetil. 97 no.12:320-323
18 March 56.

1. A Budapesti Orvost. Egyetem Sebesztovabbkepzo Klin.
(igaz. Littmann, Imre dr. egyet. tanar) kozl.
(DUCTUS ARTERIOSUS, PATENT, compl.
reversed blood-flow & pulm. hypertension, pathogen.
& surg. (Hun))
(HYPERTENSION
pulm., caused by patent ductus arteriosus with
reversed blood-flow. (Hun))

LITTMAN, Imre, Dr.

Dextral mitral recomissurotomy. Orv. hetil. 100 no.13:480-482
29 Mar 59.

1. A Laszlo korhaz sebeszeti osztalyanak kozlemenye.

(COMMISSUROTOMY

repeated mitral commissurotomy by dextral approach,
case report (Hun))

JELLINEK, Harry; LITTMANN, Imre; SULE, Eva; FOLDI, Mihaly; MATHE, Zoltan

Cases of Takayashu's disease and tuberculosis. Magy.belorv.arch.
13, no.4:104-110 Ag '60.

1. A Budapesti Orvostudomanyi Egyetem II. sz. Korbonctani Intezetek, I. sz. Belgyogyaszati Klinikajának, Fovarosi Laszlo Korhaz Sebeszet Osztalyának es a IX. ker. TBC Gondozó Intezet kozlemenye.
(AORTA dis)
(ARTERITIS case reports)
(TUBERCULOSIS, PULMONARY case reports)

JELLINEK, H.; LITTMANN, I.; SULE, E.; FOLDI, M.; MATHE, Z.

Takayashu's disease and tuberculosis. Acta med. Hung. 16 no.1:3-17
'60.

1.1st Institute of Pathology (Director: prof. L. Haranghy) and
1 st Department of Medicine (Director: prof. I. Husznyak).
University Medical School, Budapest, Department of Surgery
(Director: I. Littman) of the Central Hospital for Infectious
Diseases, Budapest, and the 9th District Tuberculosis Dispensary
(Director: G. Sule), Budapest.

(TUBERCULOSIS PULMONARY compl.)

(AORTA dis.)

(ARTERITIS compl.)

KENEDI, Istvan, dr.; LITTMANN, Imre, dr.

Indications for surgery in mitral stenosis in the 4th stage. Magy.
sebeszet 14 no.3:145-152 Je '61!

1. A Tetenyi-uti korhaz kozlemenye.

(MITRAL STENOSIS surg)

LITTMANN, Imre, dr.; SZITA, Jozsef, dr.

Surgical scrub with hexachlorophene. Orv. hetil. 102 no. 16:729-731
16 Ap '61.

1. Budapest Fovarosi Laszlo-korhaz es Orszagos Kozegeszsegugyi Intezet.

(HEXACHLOROPHENE) (SURGERY) (DISINFECTION)

FONO, Renee, dr.; LITTMANN, Imre, dr.

Cavo-pulmonary anastomosis in tetralogy of Fallot. Orv.hetil. 102
no.35:1643-1645 27 Ag '61.

1. Budapesti Orvostudomanyi Egyetem, II.Gyermekklinika es Tetenyi
uti korhaz, I.Sebeszeti osztaly.

(TETRALOGY OF FALLOT surg)

LITTMANN, Imre, az orvostudomanyok doktora

"Surgery of the hand" by Rudolf Kos. Reviewed by Imre Littmann.
Magy tud 69 no.11:740-741 N '62.

1. Tetenyi uti Korhaz foorvosa, Budapest.

*

HUNGARY
HUNGARY

BRANDSTEIN, Laszlo, Dr, GREBUSS, Sandor, Dr, LITTMANN, Imre, Dr, MATE, Karoly, Dr; Capital City Council Executive Committee Tetenyi Ave Hospital, I. Surgical, Neurological and III. Medical Wards (Fovarosi Tanacs VB. [Vegrehajto Bizottsag] Tetenyi Uti Korhaz, I. Sebeszet, Idegosztaly es III. Belosztaly).

"Organic Hyperinsulinism Diagnosed as Epilepsy for Several Years (Pancreatic Islet-Cell Adenoma)."

Budapest, Orvosi Hetilap, Vol 104, No 30, 28 July 63, pages 1416-1418.

Abstract: [Authors' Hungarian summary] The authors report a case of organic hyperinsulinism which, for years, has been diagnosed as epilepsy. The hyperinsulinism resulted from a plum-sized islet-cell adenoma located in the head of the pancreas. After removal of the adenoma, the blood sugar level became normal and the patient was completely cured. In addition to the presentation of the case, the authors discuss the causes, symptoms, course of organic hyperinsulinism and the dangers of faulty diagnosis. The importance of early diagnosis is stressed. The only course of therapy is surgical removal. 3 Hungarian, 15 Western references.

1/1

LOBLOVICS, Ivan, dr.; BODNAR, Endre, dr.; BOROCZ, Lajos, dr.;
LITTMANN, Imre, dr.

Modern oximetry in heart surgery. Orv. hetil. 104 no.46:
2181-2182 17 N '63.

1. Tetenyi uti Korhaz, I sz. Sebeszeti Osztaly.
(OXIMETRY) (HEART SURGERY)
(EQUIPMENT AND SUPPLIES)

LITTMANN, Imre, dr.

On the management of the seriously ill. Orv. hetil. 105
no. 24:1105-1109 14 Je'64

1. Orvostovábbkezeti Intézet, Sebészeti Tanszék.

FONO, Renee, dr.; LITTMANN, Imre, dr.; BOROCZ, Lajos, dr.; BUKY, Bela, dr.; BODNAR, Endre, dr.; LOBLOVICZ, Ivan, dr.; TASNADI, Ferenc, dr.

Cases of patent ductus arteriosus operated on during the past 14 years. Orv.Hetil.105 no.22:1015-1017 My 31 '64.

1. Budapesti Orvostudomanyi Egyetem, II. Gyermekklinika es Orvostovabbkepzo Intezet, Sebeszeti Tanszek.

MATYUS, Lajos, dr.; BODNAR, Endre, dr.; LITTMANN, Imre, dr.; PETER, Marton, dr.

Aneurysm of the splenic artery ruptured into the gastrointestinal tract. Orv. hetil. 105 no.37:1759-1761 13.3 '64.

1. Fovarosi Tetenyi uti Korhaz, I Sebeszeti Osztaly.

BRANDSTEIN, Laszlo, dr.; MATYUS, Lajos, dr.; LITTMANN, Imre, dr.

Active surgical treatment of phlegmasia cerulea dolens.
(Thrombectomy). Orv. hetil. 106 no.7:800-801 25 Ap'65.

1. Orvostava'bkepzo Intezet, Sebeszeti Tanszek (tanszek-vezetok Littmann, Imre, dr.).

LITTMANN, Imre, dr.; LOBLOVICS, Ivan, dr.; BODNAR, Endre, dr.; BOROCZ,
Lajos, dr.

Successful surgery of left atrial myxoma. Orv. hetil. 106 no. 50:
23/0-2371 12 D ' 65.

1. Orvostovábbkezeti Intézet, Sebészeti Tanszék.

HUNGARY

BRANDSTEIN, László, Dr. BUCSTHA, Oliver, Dr. HERCZEG, Tibor, Dr. KUN, Miklós,
Dr. LÁVYI, Ferenc, Dr. LITTMANN, Imre, Dr. MATYUS, Lajos. Dr; Institute of
Postgraduate Medical Education, I. and II. Departments of Surgery (Orvos-
továbbképző Intézet, I. és II. Sebészeti Tanszék), Budapest.

"Modern Machine Suture in Operations on the Digestive Tract."

Budapest, Orvosi Hetilap, Vol 107, No 42, 16 Oct 66, pages 1984-1986.

Abstract: [Authors' Hungarian summary] In the authors' opinion, the new Soviet suturing machines represent a great advance in surgery involving the digestive tract. The mode of application of the machines and the experiences in the course of 206 cases involving machine suturing are described and, on the basis of these experiences, the widespread use of these machines is recommended. 2 Russian, 1 Western references.

1/1

- 75 -

BERTY, Imre; LITTVAY, Dezso

Investigation of the detail-producing capacity of color positive
films. Kep hang 5 no.6:162-166 '59 (EEAI 9:3)

1. Forte Foto-kemiai Ipar, Vac.
(Color photography)

BERTY, Imre; LITTVAY, Dezsö

Testing the detail reproducing capacity of color positive films.
Kép hang 5 no. 6:162-166 D '59.

1. Forte Foto-kemiai Ipar, Vac. 2. "Kép- és Hangtechnika" szerkeszto
bizottsági tagja (for Berty).

LITUKHIN, G.D.; DOMOGATSKIY, G.A.

Fire hazards in the production of acetylene with the electric
cracking process. Sbor. rab. pozh.-ispyt. sta. no.3:13-30 '63.
(MIRA 17:7)

1. Saratovskaya pozharno-ispytatel'naya stantsiya.

S/117/60/000/012/013/022
AC04/AC01

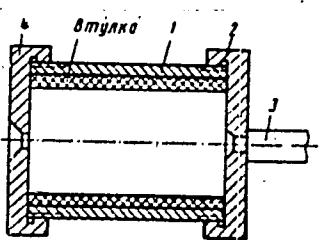
AUTHORS: Koryushenko, N. A., Litunov, V. S., Plakhov, S. M.

TITLE: Centrifugal Casting of Caprone Parts

PERIODICAL: Mashinostroitel', 1960, No. 12, pp. 33-34

TEXT: The collaborators of the Rostovskiy zavod "Krasnyy Aksay" (Rostov "Krasnyy Aksay" Plant) in cooperation with the Laboratoriya plastmass Nauchno-issledovatel'skogo instituta tekhnologii mashinostroyeniya (Laboratory of Plastics of the Scientific Research Institute of Mechanical Engineering Technology) have

Figure 1: developed and introduced in production the centrifugal casting of caprone parts, where the caprone is melted directly in the mold. Figure 1 shows the most simple mold for the casting of caprone bushings composed of shell 1, cover 2 with holder 3 and cover 4 with centering cone. The bushings are manufactured in the following way: a weighed portion of caprone is put into the mold and melted with the aid of a heating installation, e. g. a muffle, gas burner, h-f current generator. The melting



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A004/A001

Centrifugal Casting of Caprone Parts

point of the caprone can be determined by a thermocouple placed in the interior of the mold (melting point 230 - 260°C) or by a sensor. The mold with the molten caprone is clamped in a Jäche chuck, while the live center of the tail spindle is set in the cone of cover 4. Then the mold is rotated until it is cooled down to 100 - 120°C. After the casting process the bushing should be treated with hot water, 15 minutes per 1 mm of component thickness. Figure 2

Figure 2:

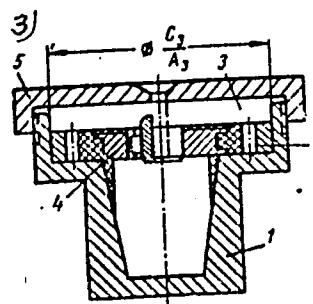
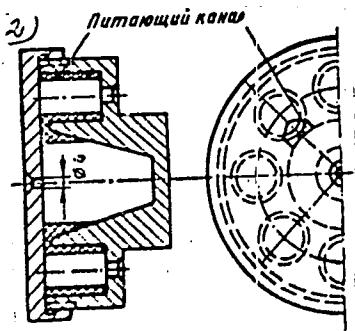


Figure 3:

shows a mold for the manufacture of caprone bushings of small diameter, while Figure 3 shows a press-mold for the manufacture of caprone gears with metallic rings. The press-mold is composed of conical body 1, ring 2, forming the teeth, locator 3, ring 4 and cover 5. Figure 4 shows the simple design of an assembled press-mold for the casting of caprone cups, composed of molding

Card 2/3

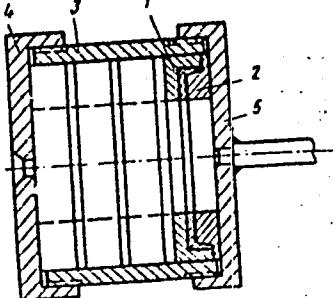
S/117/60/000/012/013/022
A004/4001

Centrifugal Casting of Caprone Parts

parts 1 and 2, magazine mold 3 and covers 4 and 5. For the centrifugal casting process degreasing and drying of the caprone is only of secondary importance, and parts from caprone not being pre-treated possess high physical-mechanical properties. The lighter impurities remaining in the raw material are driven to the

Figure 4:

inner surface of the component by the effects of the centrifugal force. The contaminated caprone layer can be eliminated after casting by boring the inner diameter of the bushing. For sleeve bearings operating under conditions of insufficient lubrication a caprone-graphite composition with 30% graphite content is used. There are 4 figures.



Card 3/3

USSR.

Kinetics of crystal growth in the regions limited by the rate of molecular diffusion. N. I. Litvinovskii and G. M. Tsvet. *Zhur. Tekh. Fiz.* 2, 1, 112-114 (1933). Equations are developed for the rate of crystal growth in the region of pure sol. diffusion in supersatd. solns. The rate of crystal growth in a supersatd. soln. of $K_2Cr_2O_7$ was detd. by measuring the rate of decrease of the supersat. of the soln. The value thus obtained agrees well with the theoretically calc'd. value.

J. Rovtar Leach

Plan
Prest

LITUNOVSKII

3
3
0

USSR

✓ Rate of growth and solution of potassium dichromate crystals at the kinetic region. N. I. Litunovskii. Zina. 1944. Fiz. 23, 1115-43 (1943).—The rate of change of the linear dimensions, λ , of $K_2Cr_2O_7$ crystals during crystn. and soln. was measured for different values of the initial supersatn., the dimensions of the seed crystals, and r.p.m. of stirrer. A semiempirical equation is derived expressing λ as a function of the supersatn.: $\lambda_{init} = 2.59 \times 10^{-4}$ $\exp(-8.42 \times 10^{-4} \log((c_0 + x)/c_0))$; $\lambda_{soln} = 3.165 \times 10^{-4}$ $\exp(-2.5 \times 10^{-4} \log((c_0 + x)/c_0))$, where c_0 is the equil. concn. The values of the free linear and surface energies on the crystal-soln. boundary were calcd. — J. R. L.

LITUNOVSKIY, N.I.

USSR.

Application of solution kinetics of potassium dichromate to a study of the mass exchange in heterogeneous systems in the region of convection diffusion. N. I. Litunovskii, I. I. Petrenko, and O. M. Todez. Zhur. Tekh. Vis. 23, No. 3, 342 (1955).--The soln. of $K_2Cr_2O_7$ crystals in H_2O , stirred with a stirrer rotating at 1200 r.p.m. was studied by

a previously developed method (cf. *ibid.*, 11:35-43). The decrease dR/dt of the particle size depends on the convection and diffusion of a supersatd. layer formed around the particles. The criteria of Nusselt, Reynolds, and Prandtl can be calcd. from measurements of dR/dt , detd. from an increase in the concn. of the solute and from measurements of the movement of particles. The vertical distribution of crystallites in a turbulent stream is similar to that of gas mols., and it is given by the formula $n(h) = n_0 \exp(-\beta gh/\nu_0^2)$. The no. $n(h)$ of particles per cc. at the height h was detd. experimentally, by sampling, and from this the velocity u_0 was detd. for particles of different size. The pulsating velocity of the stream, v_0 , can be calcd. from the knowledge of u_0 and the diam. of particles. The criterion of Reynolds (Re) can be calcd. from $Re(u_0 - u_s)d/\nu$ (ν = viscosity of H_2O) and from this the criterion of Nusselt (Nu) can be obtained. Since laws of mass exchange and heat exchange are similar, the detn. of R_t and Nu by this method is applicable to other types of turbulent mixing, such as the combustion of powd. fuel.

S. Pakswert

115 83

L 2273-66 ENT(m)/EPA(u)-2/EVA(m)-2 IJP(c) GS

ACCESSION NR: AT5007942

UR /0000/64/000/000/0600/0603

AUTHOR: Aleksayev, A. G.; Bassargin, Yu. G.; Zhukov, I. F.; Lavrent'ev, Yu. K.; Litunovskiy, R. N.; Malyshov, I. F.; Nevrov, N. P.; Stepanov, A. V.; Tuzov, I. V.

TITLE: Basic characteristics of the isochronous cyclotron with variable particle energy

SOURCE: International Conference on High Energy Accelerators⁵ Dubna, 1963.
Trudy. Moscow, Atomizdat, 1964, 600-603

TOPIC TAGS: high energy accelerator, ion beam, cyclotron

ABSTRACT: At the Scientific Research Institute of Electrophysical Equipment im. D. V. Yefremov, a 2.4-meter cyclotron is being developed with a magnetic field having 3-dimensional variation. This cyclotron is intended to accelerate particles with Z/A equal to 0.125-1 in a wide range of energies. The limits of energy variation, in Mev, are: 7.5-100 (protons); 5-60 (deuterons), 10-120 (alpha-particles), and 10-145 (nitrogen ions). The device is designed to obtain relatively large ion currents, which will make it possible to realize experiments with beams against internal and remote targets. The principal parameters of the cyclotron include: pole diameter, 2400 mm; magnetic structure, tri-sector and weakly spiral; gaps, 230 mm (hill) and 960 mm (valley); magnetic field in center, 4000-17,000 oersteds;

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ACCESSION NR: AT5007942

total electromagnetic power, 2800 kilowatts; electromagnet's weight, 720 tons; frequencies of resonance system, 5-22 megahertz; accelerating voltage in Dee, 125 kilovolts; Dee gap, 50 mm; high-frequency load, 600 kilowatts; stability, 10^{-4} (winding currents), 10^{-5} (frequency of accelerating voltage), and 10^{-3} (its amplitude). After deflection the beam is directed into a commutating magnet by which the beam can be directed against targets set up in three experimental rooms: (I) high-intensity beams, (II) neutron time-of-flight experiments, and (III) nuclear precision spectroscopy with electromagnetic monochromator. Ion-optical channeling, focusing and commutating of the beam are done by six pairs of quadrupolar lenses, two identical rotary electromagnets, a monochromator electromagnet, and two small electromagnets for correction of the beam in the vertical direction. The resonance system is a quarter-wave coaxial line ending with the 180-degree Dee. The resonant frequency is reset by remote displacement of a plate without disrupting the vacuum. The frequency is established with an accuracy of 5-18 kc plus or minus. Smooth high-frequency regulation is provided by two trimmers, permitting regulation of frequency to 2-4%. The high-frequency oscillator has a capacitative connection with the resonance system. A connecting rod is used, without disruption of the vacuum, to shift the Dee in the vertical and horizontal planes, and also along its own axis. The accelerator chamber consists of two sections: a high-vacuum chamber able to exhaust, along with the resonant line, the magnetic gap; and a fore-vacuum section

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installed in the electromagnet poles. Remotely controlled measuring probes and targets for operating with the internal beam are installed in the chamber. Placement of the ion source is also done remotely; moreover, it is possible, without disruption of the vacuum, to shift the cathode and also the source as a whole. The magnetic field was modelled with an electromagnet having a pole diameter of 342 mm, on which several alternative magnetic systems were investigated; and also with an electromagnet having a pole diameter of 685 mm, which was used to investigate in detail modifications in the weakly-spiral structure. On the basis of the electromagnet with poles 685 mm in diameter, a start has been made at the present time on a cyclotron with three-dimensional variation of the magnetic field, with the magnetic system of a type described in the present report. The current cyclotron will accelerate protons up to 6 Mev and deuterons up to 4 Mev, which will permit investigations into various alternative systems for yielding beams. Orig. art. has: 6 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific Research Institute of Electrophysical Equipment, GKAE SSSR)

SUBMITTED: 20 May 64

NO REF SOV: 000

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SUB CODE: RE, MP

OTHER: 001

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L 01814-67 EWT(m)/EWP(1) IJP(c)

ACC NR: AP6035633

SOURCE CODE: UR/0089/66/020/005/0429/0430

AUTHOR: Alekseyev, A. G.; Barkovskiy, V. N.; Basargin, Yu. G.; Vasil'yev, V. N.;
 Litunovskiy, R. N.; Min'yayev, O. A.; Nikolayev, V. N.; Stepanov, A. V.

37

B

ORG: none

TITLE: 68.5 cm sector-focused cyclotron

SOURCE: Atomnaya energiya, v. 20, no. 5, 1966, 429-430

TOPIC TAGS: cyclotron, deuteron, proton

ABSTRACT: A sector-focusing cyclotron that can deliver protons of 7.5 to 100 Mev and deuterons of 0.5 to 4.0 Mev is described. The acceleration of molecular H₂ ions underscores the essential role of the process of proton dissociation. Under certain conditions intrinsic to the sector-focusing cyclotron where the ions achieve several hundred revolutions, this process can interfere with obtaining the intensity of the ion beam at finite energies, if the vacuum in the accelerator chamber is less than 1.10⁻³ mm Hg cm⁻³. Orig. art. has: 3 figures. (NA)

SUB CODE: 20 / SUBM DATE: 04 Sep 65 / ORIG REF: 002 / OTH REF: 001

UDC: 621.384.611

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Card : 1/1

- 8 -

LITUNOVSKY, R.N.

Method for controlling the energy of particles in a cyclotron
with a periodic magnetic field. Elektrofis. app. no. 2,119-
150 '64. (MIRA 18:3)

21.03.58
BUGAYEV, Aleksey Alekseyevich 'tokar'; IZVEKOV, Arkadiy Ivanovich, master elektrikov; TRET'YAKOV, Eduard Aleksandrovich, inzh.-tekhnolog; ORZHEKHOVSKIY, Pavel Iosifovich, slesar'; LITUS, Il'ya Sil'vestrovich; BABANOV, Nikolay Fedorovich, starshiy master; STHODOYEV, Aleksandr Konstantinovich, mekhanik; TERENIK, Mikhail Semenovich; LADYGIN, Aleksandr Iosifovich

From the rostrum of a plant meeting. Izobr.i rats. no.12:24-28
D '58. (MIRA 11:12)

1. Novo-Kramatorskiy mashinostroitel'nyy zavod (for all). 2. Mekhanicheskiy tsekh No.5 (for Bugayev). 3. Mekhanicheskiy tsekh No. 7, predsedatel' tsekhovogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Izvekov). 4. Upolnomochennyj Byuro ratsionalizatorov i izobretateley v 1-m mekhanicheskem tsekhe (for Tret'yakov). 5. Mekhanicheskiy tsekh No.7 (for Orzhekhevskiy). 6. Rukovoditel' sektsii sodeystviya izobretatel'stvu i ratsionalizatsii Soveta veteranov truda (for Litus). 7. Fasennoliteynyj tsekh No.1 (for Babanov, Syroyedov). 8. Nachal'nik otdela tekhnicheskoy informatsii i izobretatel'stva (for Terenik). 9. Predsedatel' zavodskogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Ladygin).

(Kramatorsk--Machinery industry)

ACCESSION NR: AR5009053

S/0272/65/000/002/0087/0087

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika. Otd. vyp., Abs. 2, 32, 695

AUTHCR: Khokhlov, A.D.; Litvin, S.I.; Semyaldin, F.V.; Koroshev, G.P.

TITLE: A capacitor microphone with a highly stable configuration of the remotely controlled directivity pattern

CITED SOURCE: Tr. Leningr. in-ta kinoiszhetekov, vyp. 10, 1964, 67-67

TOPIC TAGS: capacitor microphone, directivity pattern stability, button microphone

TRANSLATION: The article discusses a universal microphone design permitting one to obtain any given number of directivity pattern configurations. The transition from one pattern to another is accomplished in the low-impedance output circuits of the microphone. The 19A-9 button microphone was used as the sound receiver. Two identical "anode" follower cascades served as the amplifying unit. The transition from one directivity pattern configuration to another is instantaneous and the sensitivity of the capacitor microphone remains constant. Bibl. with 1 title; 8 illustrations.

SUB CODE: EC ENCL: 00

Card 1/1

LITUS, V.N.

Some problems in school hygiene. Zdrav. Bel. 8 no.4:45-46
(MIRA 15:6)
Ap '62.

1. Gosudarstvennyy sanitarnyy inspektor po shkol'noy
gigiyeny Ministerstva zdravookhraneniya BSSR.
(SCHOOL HYGIENE)